



## **Getting Started Guide**

HP Integrity rx2600 server and  
HP workstation zx6000

Document Part Number: A9664-90030

**July 2004**

This guide provides an overview of the system front and rear panel connectors, instructions on how to set up and configure your system, and troubleshooting tips. The appendix includes regulatory notices.

© 2004 Hewlett-Packard Company

Microsoft®, Windows®, Windows 2000®, and Windows XP® are registered trademarks of Microsoft Corporation in the U.S. and other countries.

Intel® and Itanium® are registered trademarks of Intel Corporation in the U.S. and other countries.

All other product names mentioned herein may be trademarks of their respective companies.

Hewlett-Packard Company shall not be liable for technical or editorial errors or omissions contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this material. The information in this document is provided “as is” without warranty of any kind, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose, and is subject to change without notice. The warranties for HP products are set forth in the express limited warranty statements accompanying such products. Nothing herein should be construed as constituting an additional warranty.

This document contains proprietary information that is protected by copyright. No part of this document may be photocopied, reproduced, or translated to another language without the prior written consent of Hewlett-Packard Company.



**WARNING:** Text set off in this manner indicates that failure to follow directions could result in bodily harm or loss of life.

---



**CAUTION:** Text set off in this manner indicates that failure to follow directions could result in damage to equipment or loss of information.

---

Getting Started Guide

HP Integrity rx2600 server and HP workstation zx6000  
Second Edition (July 2004)

Document Part Number: A9664-90030

## Important Safety Warnings



**WARNING:** Avoiding Electrical Shocks. To avoid electrical shock, do not open the power supplies. There are no user-serviceable parts inside.

To avoid electrical shock and harm to your eyes by laser light, do not open the DVD laser module. The laser module should be serviced by service personnel only. Do not attempt to make any adjustment to the laser unit. Refer to the label on the DVD for power requirements and wavelength. This product is a class I laser product.



**WARNING:** Removing and Replacing the Cover. For your safety, never remove the system side cover without first disconnecting the power cord from the power outlet and removing any connection to a telecommunications network. If a Power Protection Device is fitted to your system, you must shut down your computer using its on/off switch, then remove the power cord before removing the system's side cover. Remove the Power Protection Device cables before any servicing operation. Always replace the side cover before switching the system on again.



**WARNING:** Battery Safety Information. There is a danger of explosion if the battery is incorrectly installed. For your safety, never attempt to recharge, disassemble, or burn an old battery. Replace the battery with the same or equivalent type, as recommended by the manufacturer.

The battery in this system is a lithium battery that does not contain any heavy metals. However, to protect the environment, do not dispose of batteries in household waste. Return used batteries either to the shop from which you bought them, to the dealer from whom you purchased your system, or to HP so that they can either be recycled or disposed of in the correct way. Returned batteries are accepted free of charge.



**WARNING:** Avoiding Burn Injuries. Some parts inside the computer will be hot. Wait approximately three to five minutes for them to cool down before touching them.



---

**CAUTION:** Avoiding Static Electricity. Static electricity can damage electronic components. Turn OFF all equipment before installing an accessory card. Don't let your clothes touch any accessory card. To equalize the static electricity when replacing an accessory card, rest the accessory card bag on top of the system unit while you are removing the card from the bag. Handle the card as little as possible and with care.

---



---

**CAUTION:** Information on Ergonomic Issues. It is strongly recommended that you read the ergonomics information, available in the "Working In Comfort" section of this manual, before using your system. You can access more extensive ergonomics information at: [www.hp.com/ergo](http://www.hp.com/ergo).

---

---

**NOTE:** Recycling Your System. HP has a strong commitment toward the environment. Your HP system has been designed to respect the environment as much as possible. HP can also take back your old system for recycling when it reaches the end of its useful life. HP has a product take-back program in several countries. The collected equipment is sent to an HP recycling facilities in Europe or the U.S.A. As many parts as possible are reused. The remainder is recycled. Special care is taken for batteries and other potential toxic substances, these are reduced into non-harmful components through special chemical processes. If you require more details about the HP product take-back program, contact your local dealer or your nearest HP Sales Office.

---

---

# Contents

## 1 Setting Up and Using Your System

System Configurations .....	1-1
Front Panel .....	1-2
Rear Panel .....	1-4
Setting Up Your System .....	1-6
Tools .....	1-7
Connecting Devices .....	1-8
Starting and Stopping Your System .....	1-10
Starting Your System .....	1-10
turning off Your System .....	1-11
Installing Hardware Components .....	1-12
Firmware and Drivers .....	1-13
Configuring Your System .....	1-14
Extensible Firmware Interface .....	1-14
Management Processor .....	1-25
Baseboard Management Controller .....	1-26

## 2 Troubleshooting

Your System Does Not Start Properly .....	2-2
You Find a Hardware Problem .....	2-3
You Forgot the EFI Password(s) .....	2-5
Troubleshooting with the LEDs .....	2-6
Troubleshooting with the e-buzzer .....	2-10
the System Event Log .....	2-12
Software Diagnostics Tools .....	2-13
HP e-DiagTools Hardware Diagnostics .....	2-13
Restoring the OS .....	2-18

Where to Get Help . . . . .	2-19
Information to Collect Before You Contact Support . . . . .	2-19
Online Support . . . . .	2-20
Phone Support . . . . .	2-20
Additional Documentation . . . . .	2-21

## **A Regulatory Information**

Declaration of Conformity . . . . .	A-2
Federal Communications Commission Radio Frequency Interference Statement (for USA only). . . . .	A-3
Notice for Canada . . . . .	A-3
Safety Warning for the USA and Canada . . . . .	A-3
Notice for France . . . . .	A-4
Notice for the Netherlands . . . . .	A-4
Notice for Germany . . . . .	A-4
Noise Declaration for Germany . . . . .	A-5
Notice for Japan (Class A) . . . . .	A-5
Notice for Korea . . . . .	A-5
Notice for Taiwan . . . . .	A-5

## **Index**

---

# setting up and using your system

This chapter includes:

- descriptions of the system front and rear panels
- information on how to set up your system
- instructions for starting and stopping your system
- basic system configuration information

## system configurations

The HP Integrity rx2600 server and HP workstation zx6000 are available in *tower* and *rack-mount* configurations.

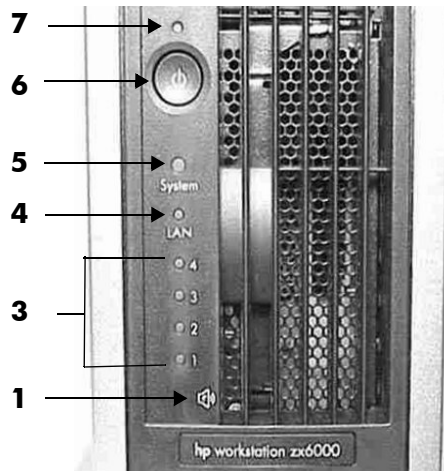
Configuration	Accessory Slots	Fan Type/Speed	Management Processor	Redundant Hot-swap Power Supply
workstation zx6000 tower	3 PCI 1 AGP	Quiet/ Low	No	No
workstation zx6000 rack-mount	3 PCI 1 AGP	Hi Capacity/ High	Optional	Optional
Integrity rx2600 server tower	4 PCI	Hi Capacity/ High	Yes	Yes
Integrity rx2600 server rack-mount	4 PCI	Hi Capacity/ High	Yes	Yes

## front panel

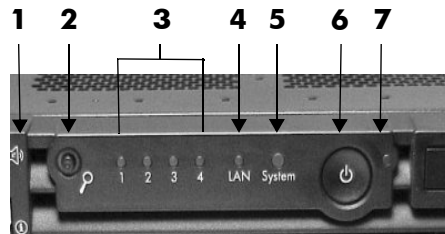
The front panels of the rx2600 and zx6000 have the following features:

- **Power LED** is green when the power is on, or the power button is pushed in. If the power is on and the button is pushed in, the light stays on even after the system is powered down. When the button is released, the green light turns off.
- **Power Button** turns the system power on and off.
- **LAN LED** indicates the system is communicating over the Gigabit or System Management LAN.
- **System and Diagnostic LEDs** identify system errors on workstation zx6000s with no MP card installed.
- **Locator LED and Button** (rack-mount configuration only) identify the rack position of the system.
- **Disk Activity LEDs** on each hard drive turn green when the disk is accessed.
- **e-buzzer** icon indicates the position of the internal speaker.





Front Panel, Tower Configuration



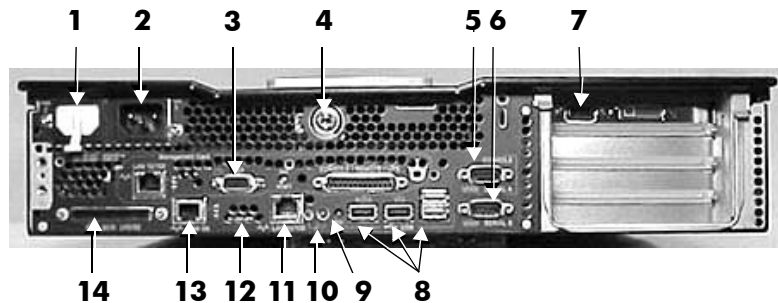
Front Panel, Rack-mounted Configuration

<b>1</b> e-buzzer Icon	<b>5</b> System LED
<b>2</b> Locator LED and Button (rack-mounted system only)	<b>6</b> Power Button
<b>3</b> Diagnostic LEDs 1-4 (active only on workstation zx6000s with no MP card installed)	<b>7</b> Power LED
<b>4</b> LAN LED	

## rear panel

The rear panel has the following features:

- **Connectors** are shaped to go in one way only to prevent improper cable attachment.
- **Ports** are labeled for easy identification.
- **Management Processor (MP)** ports are positioned above (rack-mount) or to the right of (tower) standard connectors (optional on workstation zx6000).
- **LAN LEDs** provide additional information:
  - ❑ Four **Gigabit LAN LEDs**
  - ❑ Two **System Management 10/100 LAN LEDs**
  - ❑ Four **MP LAN LEDs** (optional on workstation zx6000)
- **Monitor Connector** (on graphics card). workstation zx6000s may include graphics cards with single or multiple monitor support.
- **Locator LED** (rack-mount configuration only) identifies the rack position of the system.



### Rear Panel Connectors

<b>1</b> Power (PWR2)	<b>8</b> USB ports (mouse and keyboard ports labelled)
<b>2</b> Power (PWR1)	<b>9</b> TOC button
<b>3</b> MP VGA, serial, LAN, reset (optional on workstation zx6000)	<b>10</b> Locator LED and button
<b>4</b> System lock	<b>11</b> 10/100 LAN
<b>5</b> Serial port A (console)	<b>12</b> LAN LEDs
<b>6</b> Serial port B	<b>13</b> 10/100/1000 LAN
<b>7</b> Monitor connector(s) (workstation zx6000 only)	<b>14</b> LVD/SE SCSI

## setting up your system



**WARNING:** If you have any doubt that you can lift the system or monitor safely, do not try to move them without help.

---

1. Check the materials list shipped with your system to verify that you have all of the components.
2. Position the system so that its rear connectors are easily accessible:
  - ❑ *If the system is a tower configuration*, place the system in an area with easily accessible power outlets and enough space for the keyboard, mouse, and any other accessories.
  - ❑ *If the system is to be rack-mounted*, refer to the mounting instructions provided with your system.

## tools

You do not need any tools to set up your system. If you plan to install additional hardware components, you need:

- Flat blade screwdriver
- T-15 Torx driver
- Special processor tool (provided with processor)
- Static-free mat
- Static strap



---

**WARNING:** Metallic particulates can be especially harmful around electronic equipment. This type of contamination may enter the data center environment from a variety of sources, including, but not limited to, raised floor tiles, worn air conditioning parts, heating ducts, rotor brushes in vacuum cleaners or printer component wear. Because metallic particulates conduct electricity, they have an increased potential for creating short circuits in electronic equipment. This problem is exaggerated by the increasingly dense circuitry of any electronic equipment.

Over time, very fine whiskers of pure metal can form on electroplated zinc, cadmium, or tin surfaces. If these whiskers are disturbed, they may break off and become airborne, possibly causing failures or operational interruptions. For over 50 years, the electronics industry has been aware of the relatively rare, but possible, threat posed by metallic particulate contamination. During recent years, a growing concern has developed in computer rooms where these conductive contaminants are formed on the bottom of some raised floor tiles.

Although this problem is relatively rare, it may be an issue within your computer room. Since metallic contamination can cause permanent or intermittent failures on your electronic equipment, Hewlett-Packard strongly recommends that your site be evaluated for metallic particulate contamination before installation of electronic equipment.

---

## connecting devices

Before connecting any cords or cables to your system, please read the Warning Notices in the front of this manual.

## keyboard, mouse and power

The rx2600 and zx6000 systems ship with a USB keyboard and mouse.

- » Plug the keyboard and mouse into USB connectors on the rear panel of the computer. (Ports are labelled.)

There are two power receptacles on the rear panel of the system.

- » If you purchased your system *without* a second power supply, cover the second receptacle (PWR2) with a plastic cap.



**WARNING:** For your safety always connect equipment to a grounded wall outlet. Always use a power cord with a properly grounded plug, such as the one provided with the system, or one in compliance with your national safety standards. This equipment can be disconnected from the power by removing the power cord from the power outlet. The equipment must be located close to an easily accessible power outlet.

---

## graphics cards and monitors

Integrity rx2600 servers and workstation zx6000s with Management Processor (MP) cards support a VGA monitor connected to the VGA port on the MP card.

workstation zx6000s with **no** MP cards are available with a range of AGP graphics cards.

- Graphics cards may include an 15-pin connector, an 18-pin connector, or both. Only one connecting cable is needed for each monitor.
- Some video cards are pre-installed in the system, while others are packaged separately and shipped with the system. If your workstation did not ship with a pre-installed graphics card, you must install the card and load the drivers. Refer to the documentation included with your graphics card for instructions.
- Frequencies of 85Hz and higher provide flicker-free viewing.
- If the monitor you select is DDC-2B or DDC-2B+ compliant, the graphics card automatically limits itself to those resolutions and frequencies supported by that monitor. In this case, you do not need to use the tables to select your monitor.
- For a complete and current list of supported cards with supported display resolutions and frequencies, see:
  - ❑ <http://partsurfer.hp.com>



**CAUTION:** To prevent possible damage to your monitor, make sure you select a monitor that supports the resolutions and frequencies you wish to use.

---

- For more detailed information about your graphics card, see the manufacturer's web site:
  - ❑ ATI: [www.ati.com](http://www.ati.com)
  - ❑ NVIDIA: [www.NVIDIA.com](http://www.NVIDIA.com)

## starting and stopping your system

HP Integrity rx2600 servers and workstation zx6000s come in many different configurations. Pay careful attention to the directions below and choose the options that match the OS and packaging you purchased.

### starting your system

To start your system:

1. Turn on the monitor before you start your system.
2. Press the power button on the front panel. The system starts.

During system startup, the display may remain blank for up to one minute. This is normal.

*If the system has an MP card, the system light blinks.*

*If the system does **not** have an MP card, the following should occur:*

- ☐ Power LED turns on
  - ☐ System LED blinks on and off
  - ☐ On workstation zx6000s with no MP card installed, diagnostic LEDs 1-4 create scrolling pattern
3. If you are prompted for a password, type it and press **Enter**.

The prompt displays only if you have set a password using the Extensible Firmware Interface (EFI). (See “Management Processor” on page 1-25.)



## initializing your software

The rx2600 and zx6000 can be configured with the Operating System (OS) pre-installed or packaged separately.

- If you purchased a system with the OS pre-installed, the initialization process starts when you start the workstation for the first time.

The software initialization process takes a few minutes. You can change the settings after the software has been initialized.



**CAUTION:** Do NOT switch OFF the system while the software is being initialized — this could cause unexpected results.

---

The initialization process:

- ☐ Displays the license agreement.
- ☐ Asks questions about the system.
- If you purchased a system and the OS is **not** pre-installed, install the OS now:
  - ☐ **HP-UX:** Follow the instructions on the *HP-UX CD* envelope.
  - ☐ **Linux:** Use the *HP Enablement Kit for Linux CD* and follow the instructions in its accompanying booklet.
  - ☐ **Windows:** Windows is always pre-installed on workstation zx6000s. Use the *HP Smart Setup DVD* to begin the software setup process on Integrity rx2600 servers.

## turning off your system

To turn off the system:

1. Exit all applications.
2. Execute the Shut Down command provided by your OS.
3. When prompted, press the power button on your system.

---

**NOTE:** You can also shut down using the power button on the system. When you press the power button, the OS shuts down and the power turns off.

---

## installing hardware components

If you purchased an accessory card, a graphics card, or other hardware components that were not installed in your system at the factory, you must install those components now.



---

**WARNING:** For most hardware installation procedures, you must power off the system and unplug the power cord from the outlet.

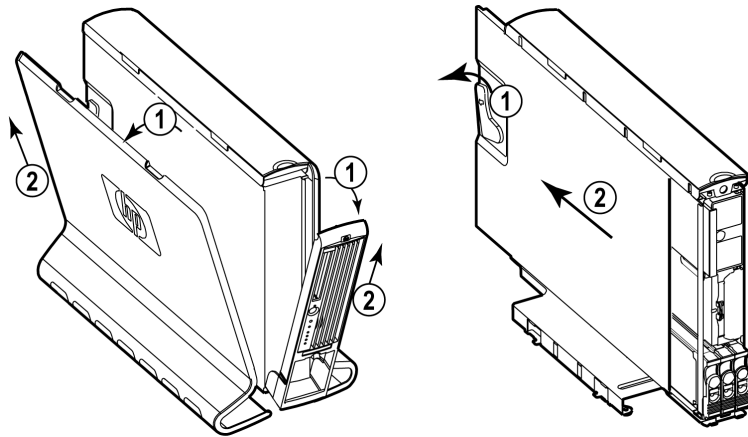
---

---

**NOTE:** To maintain FCC/EMI (Electromagnetic Interference) compliance, replace all covers and make sure all screws are properly seated after you replace components.

---

1. If you have already connected and turned on the system, turn off the system and disconnect all cables from the rear panel.
2. Remove the system access covers.



3. Install the new components:
  - ❑ See the *Installation Poster* provided with your system for the location of internal components.
  - ❑ For detailed instructions on installing hardware components, see the *hp rx2600/zx6000 Operation and Maintenance Guide*.
4. Replace the system access covers.
5. Connect the system.

## firmware and drivers

To download the latest drivers and firmware for your:

1. Go to: **<http://www.hp.com/go/bizsupport>**

Follow the menu prompts to navigate to the support page:

- ◆ Select **download drivers/software**.
- ◆ Enter the product name in the search field (**rx2600** or **zx6000**).
- ◆ Select the search result.
- ◆ Choose the driver or firmware upgrade you need to download.
- ◆ Click the **i** information icon for instructions on how to download, unpack, and install the driver or firmware upgrade.

These web sites contain a wide range of free information, including downloadable documentation, service and support options, and the latest versions of drivers and utilities. You also can obtain instructions on how to upgrade firmware and register to automatically receive information on new driver availability.

## configuring your system

Three tools are available to configure your system:

- Extensible Firmware Interface (EFI), page 1-14
- Management Processor (MP) (optional on workstation zx6000s), page 1-25
- Baseboard Management Controller (BMC), page 1-26

This section provides a brief introduction to these tools. For complete information, refer to “System Configuration” in the *hp rx2600/zx6000 Operation and Maintenance Guide*.

## extensible firmware interface

The Extensible Firmware Interface (EFI) is an interface that allows you to configure the Itanium Processor Family (IPF) firmware. The EFI menu includes the following options:

- The **EFI Shell [Built-in]** is a command line interface that allows you to operate the EFI commands or create and run automated scripts. See page 1-17.
- **Boot Option Maintenance Menu** allows you to select the order of the devices from which you want the firmware to attempt to boot the OS. You can also configure the system to boot from a configuration file. See page 1-20.
- *On systems with EFI firmware version 2.0 or higher*, the **System Configuration Menu** lets you view the system configuration and change or delete administrator and user passwords. See page 1-22.
- *On systems with EFI firmware version 1.9 or lower*, the **Security/Password Menu** lets you add, change and delete system administrator and user passwords. See page 1-25.

You can access the EFI directly when you boot the system, or by remote access.

When you turn on your system and it begins to start up, your system pauses at the **boot option** screen:

```
EFI Boot Manager ver x.xx [xx.xx]
```

```
Please select a boot option
```

```
[your OS]
```

```
EFI Shell [Built-in]
```

```
Boot option maintenance menu
```

```
Security/Password Menu
```

Use up and down arrows to change option(s).

Use Enter to select an option.

---

**NOTE:** The system pauses for seven seconds to allow you to change the boot option before booting to the default OS. To change the pause duration, select **Set Auto Boot TimeOut** from the **Boot Options Maintenance Menu** (page 1-20).

---

Use the up or down arrow keys to highlight an option, then press **Enter** to activate a selection.

To access the EFI remotely:

1. With the workstation turned off, connect the serial cable provided with your system (HP part number 5182-4794) or a compatible cable to *Serial Port A* on the rear panel of the workstation, and to your remote device.
2. Configure the terminal emulation software with these settings:
  - ☐ Baud rate: 9600
  - ☐ Bits: 8
  - ☐ Parity: None
  - ☐ Stop Bits: 1 (one)
  - ☐ Flow Control: XON/XOFF
3. Using the terminal emulation software, connect to the workstation with a *direct connection*.

---

**NOTE:** The default terminal emulation type is VT100+. This setting can be changed from the EFI **Boot Options Maintenance Menu**.

---

4. Turn on the workstation and follow the steps below to access the EFI.

## using the EFI shell

To access the EFI shell:

1. When the EFI boot option screen displays, use the arrow keys to highlight **EFI Shell**, then press **Enter**.
2. A list of *file systems* (drives and partitions), and *block devices* on hard drives is displayed. For example:

Device mapping table

```
fs0: Acpi(HWP0002,100)/Pci(1|0)/Scsi(Pun0,Lun0)/HD(Part1,Sig00112233)
blk0: Acpi(HWP0002,0)/Pci(2|0)/Ata(Primary,Master)
blk1: Acpi(HWP0002,100)/Pci(1|0)/Scsi(Pun0,Lun0)
```

3. The EFI shell first searches for an optional script file named `startup.nsh`.
  - ☐ If this file is found, it is executed automatically.
  - ☐ If the script does not automatically start an OS or other application, the shell then waits for commands to be entered at the command prompt.

4. You can now enter commands.

To run an individual command:

- a. Type the command at the shell prompt. For example, to clear the display on the monitor:

```
Shell:\> cls
```

- b. Press **Enter** to execute the command.

- ◆ Some commands require additional arguments to further define their action. For example, to display information about the system memory, you must type the command name, plus the desired category of information to display:

```
fs0:\> info mem
```

- ◆ When you enter individual commands at the command prompt, the shell performs variable substitution, then expands wild cards before the command is executed.
- ◆ To switch to a different file system, execute the following, where *fsx* is the selected file system, as listed on the screen (see step 2). For example:

```
Shell> fs0:
```

You see this prompt:

```
fs0:\> _
```

- ◆ You can also run EFI applications (files ending with **.efi**). To list applications in the current file system, run the **ls** command. For example:

```
fs0:> ls
```

You see a list of applications on the *fs0* file system.



The following section provides a list of EFI command categories. For more information, see the *hp rx2600/zx6000 Operation and Maintenance Guide* or use the EFI shell help system.

To access a:

- List of EFI command classes, execute **help** at the EFI shell prompt.
- Detailed description of a command, execute **help** and the command name at the EFI shell prompt. For example:

```
fs0:\> help date
```

EFI commands are organized into different classes based on their functions. The classes include:

- **boot** — Boot options and disk-related commands
- **configuration** — Change and retrieve system information
- **device** — Get device, driver and handle information
- **memory** — Memory related commands
- **shell** — Basic shell navigation and customization
- **scripts** — EFI shell script commands

## using the boot option maintenance menu

This menu allows you to select console output and input devices as well as various boot options. To:

- display the help available for the command, select **Help**
- return to the main Boot Options Maintenance menu, select **Exit**
- highlight an item using the arrow keys, then press **Enter**
- save your changes, select **Save Settings to NVRAM**

---

**NOTE:** If you are using the EFI Shell, you must exit the shell and return to the EFI Boot Manager to access the Boot Options Maintenance Menu.

---

The **Boot Option Maintenance Menu** contains these options.

- **Boot from a File** lets you manually run a specific application or driver.
- **Add a Boot Option** lets you add items to the EFI boot menu.
- **Delete Boot Option(s)** lets you remove options from the EFI boot menu.
- **Change Boot Order** lets you change the order of boot options. The order in which options are listed in the EFI boot menu also reflects the order in which the system attempts to boot.
- **Manage BootNext Setting** lets you select a boot option to be executed on the next system boot. This does not change the permanent system boot settings.
- **Set Auto Boot TimeOut** sets the amount of time the system pauses before attempting to launch the first item in the Boot Options list.

- **Select Active Console Output Devices** lets you define devices to display output from the system console.
  - ❑ To select a monitor connected to the MP VGA port, choose **Acpi (HWP0002, 700)/Pci(2|0)**.
  - ❑ To select a monitor connected to an AGP graphics card, choose **Acpi (HWP0003, 0)/Pci(0|0)**.

---

**NOTE:** Some operating systems support multiple consoles, such as a simultaneous serial and VGA output. **See your OS documentation to determine how many consoles are supported with your system.** Multiple consoles are not supported for HP-UX or Windows (use the *Smart Setup CD* to switch between COM A and the MP on Windows systems).

---

- **Select Active Console Input Devices** lets you define devices to provide input to the system console.
- **Select Active Standard Error Devices** lets you define the devices that display error messages from the system console.
- **Cold Reset** shuts down and restarts the system.
- **Exit** returns to the EFI startup menu.

## using the system configuration menu

The **System Configuration Menu** (available on systems with EFI firmware version 2.0 or higher) includes the following options:

- The **Security/Password Menu** lets you change the administrator and user passwords.
- The **Advanced System Information Menu** displays information about system and component configuration.
- **Set System Date** lets you modify the system date.
- **Set System Time** lets you modify the system time.
- **Reset Configuration to Default** lets you restore system settings to their original configuration.
- **Help** displays additional information about the available options.
- **Exit** returns to the EFI startup menu.

## security/password menu

You can set administrator and user passwords to provide different levels of access to the system firmware:

- The **Administrator** can access and change all settings in the EFI Boot Manager program and can run the EFI shell.
- The **User** can access basic functions in the EFI Boot Manager.

---

**NOTE:** These are **not** OS passwords. These passwords limit access to the firmware interface only. For information on setting OS passwords, see your OS user guide.

---

To add, change or delete passwords:

1. Select **Security/Password Menu**.
2. Select either:
  - ☐ **Set Administrator Options**
  - ☐ **Set User Options**
3. Select:
  - ☐ **Set Administrator Password** or **Set User Password** to set a new password.
  - ☐ **Enable/disable Password** to specify whether a password is required.
  - ☐ **Help** for assistance.
4. When you are finished, select **Exit**.

## **advanced system configuration menu**

The **Advanced System Configuration Menu** displays:

- all system information
- system information
- processor information
- cache information
- memory information
- bootable devices information
- boot information
- firmware information
- warning and stop boot information
- chip revision information

## **using the security/password menu**

The **Security/Password Menu** on systems with EFI firmware version 1.9 or lower is identical to the security/password submenu of the **System Configuration Menu**. See page 1-23.

## management processor

The Management Processor (MP) is an independent support processor for the system console. MP provides services that facilitate the management of the host system.

---

**NOTE:** Not all systems include a MP card. To determine if the card is installed, look at the back panel of your system. If the MP card is installed, you will see a 25-pin Serial Port.

---

Feature	Description
Always on capability	The MP is alive as long as the power cord is plugged in.
User/password access control	The users supported are both operators and administrator.
Multiple access methods	The MP console can be accessed by direct monitor connection, using a terminal or laptop with a direct serial connection, by modem, or by telnet or web browser on the LAN.
Mirrored console	The system console output stream is reflected to all of the connected console users. Any user can provide input provided the right console is selected and the serial console is deselected.
Console display and event logs	The system console, system event logs (chassis codes), Virtual Front Panel (VFP) and system power and configuration status provide information for the user.
An independent, non-mirrored session	This is available from local and modem ports for MP connection (CSP), or OS login (SE).
Additional features	Additional features include: power control, system reset, and Transfer of Control (TOC).

---

For more information see “System Configuration” in the *hp rx2600/zx6000 Operation and Maintenance Guide*.

## baseboard management controller

The Baseboard Management Controller (BMC) supports the industry-standard Intelligent Platform Management Interface (IPMI) specification. This specification describes the management features that have been built into the system board. These features include:

- local and remote diagnostics
- console support
- configuration management
- hardware management
- troubleshooting

For a complete listing of BMC Commands, see the System Configuration section in the *hp rx2600/zx6000 Operation and Maintenance Guide*.



---

## troubleshooting

This chapter contains basic information to help you get your HP Integrity rx2600 server and HP workstation zx6000 up and running in the unlikely event that you experience a problem. Topics include:

- Your System Does Not Start Properly
- You Find a Hardware Problem
  - Keyboard and Mouse Problems
  - Graphics and Monitor Problems
- Understanding the LED and e-buzzer Codes
- Software Diagnostics Tools
- Recovering the OS
- Where to Get Help

---

NOTE: If you need technical assistance, call hp at 1-800-593-6631 (USA) or go to [www.hp.com/country/us/eng/contact\\_us.html](http://www.hp.com/country/us/eng/contact_us.html) to contact hp in your region.

---

## **your system does not start properly**

---

### **The system doesn't power on.**

---

*Make sure...*

*How*

The system's power cord is properly connected.

Connect the power cord to a working power outlet and to the rear of the system.

---

### **There is a buzzing noise.**

---

A beep code when the system starts up means that there is a configuration problem. Many of the e-buzzer codes relate to the LED diagnostic codes. See section "Using the LEDs and e-buzzer to Troubleshoot Your System."

*Make sure...*

*How*

You identify the error message correctly.

Count the number of beeps after the buzzer (see "Troubleshooting with the e-buzzer" on page 2-10). Contact HP Support (see page 2-19).

If you still have a problem, see "Software Diagnostics Tools" on page 2-13.

---

# you find a hardware problem

## keyboard problems

### The keyboard doesn't work.

<i>Make sure...</i>	<i>How</i>
The keyboard cable is correctly connected.	Plug the cable into the correct connector on the back of the system. (Keyboard port is labelled.)
The keyboard is free of debris.	Check all keys are at the same height, and none are stuck down.
The keyboard itself is not defective.	Either replace the keyboard by a known working unit or try the keyboard with another system.
You are using the correct driver.	<p>Download and install the latest driver.</p> <ul style="list-style-type: none"> <li>• For workstations: go to the "Software and Drivers" section of the HP support site: <b><a href="http://www.hp.com/go/bizsupport">www.hp.com/go/bizsupport</a></b></li> <li>• For servers: go to <b><a href="http://www.hp.com/support/itaniumservers">www.hp.com/support/itaniumservers</a></b></li> <li>• Refer to your OS documentation for instructions on installing drivers.</li> </ul>
You are using the latest firmware.	<p>Download and install the latest firmware.</p> <ul style="list-style-type: none"> <li>• For workstations: go to the "Software and Drivers" section of the HP support site: <b><a href="http://www.hp.com/go/bizsupport">www.hp.com/go/bizsupport</a></b></li> <li>• For servers: go to <b><a href="http://www.hp.com/support/itaniumservers">www.hp.com/support/itaniumservers</a></b></li> </ul>

## mouse problems

### The mouse doesn't work.

#### Make sure...

#### How

The mouse cable is correctly connected and the driver has loaded properly.

Plug the cable into a USB port on the rear panel of the system. (Mouse port is labelled.)

Reboot the system to reload the mouse driver during startup.

You are using the correct driver. If you are using HP's enhanced mouse, ensure that the correct driver is installed. This driver is provided with all Linux preloaded systems.

Download and install the latest driver.

- For workstations: go to the "Software and Drivers" section of the HP support site:  
**[www.hp.com/go/bizsupport](http://www.hp.com/go/bizsupport)**
- For servers: go to  
**[www.hp.com/support/itaniumservers](http://www.hp.com/support/itaniumservers)**
- Refer to your OS documentation for instructions on installing drivers.

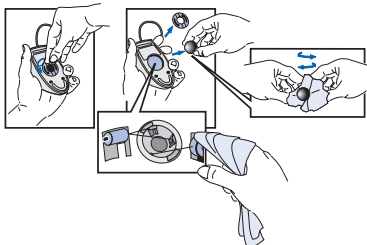
You are using the latest firmware.

Download and install the latest firmware.

- For workstations: go to the "Software and Drivers" section of the HP support site:  
**[www.hp.com/go/bizsupport](http://www.hp.com/go/bizsupport)**
- For servers: go to  
**[www.hp.com/support/itaniumservers](http://www.hp.com/support/itaniumservers)**

The mouse is clean.

Clean the mouse ball as shown below.



The mouse itself is not defective.

Replace the mouse with unit that is known to work or try the mouse with another system.

If the system starts but you still have a problem, see "Software Diagnostics Tools" on page 2-13.

## graphics and monitor problems

### The monitor doesn't work.

The system's power indicator light works but the monitor remains blank.

<i>Make sure...</i>	<i>How</i>
The monitor power cord is correctly connected.	Ensure the power cord is plugged into a working grounded power outlet and into the monitor.
The monitor is switched ON (LED is on).	Refer to the monitor manual for an explanation of the LED signals.
The graphics card is installed and the video cable is correctly connected.	Ensure the monitor (video) cable is properly connected to both the system and the monitor. Ensure that the cable is connected to the graphics card connector.
The monitor's brightness and contrast settings are correctly set.	Check the settings using the on-screen display or the controls on the front of the monitor. See your monitor documentation for instructions.
The EFI console output settings are correct.	Check and correct the settings using the EFI Boot Options Maintenance Menu. For instructions, see page 1-20.
If the system starts and you still have a problem, see "Software Diagnostics Tools" on page 2-13.	

## you forgot the EFI password(s)

If you forget your passwords, they can be reset using a jumper on the system board. See the *hp rx2600/zx6000 Operation and Maintenance Guide*.

## troubleshooting with the LEDs

Several LEDs are on the front panel of the system. The following sections describe their functions.

### power and system LEDs

The **Power and System LEDs** indicate the state of the system:

<b>Power LED</b>	<b>System LED</b>	<b>State</b>
Off	Off	Off
On (green)	Solid green	Running
On (green)	Blinking green	Booting
On (green)	Blinking orange (1/sec.)	Attention
On (green)	Blinking red (2/sec.)	Fault

### locator LED and button

You may find it difficult to identify a specific computer requiring maintenance if you have several similar systems on one rack. The locator LED is designed to help identify the system in a rack.

To activate the locator LED, press the locator button on the front bezel of the system (rack-mounted systems only).

---

**NOTE:** You also can light the locator LED using BMC or MP commands. See the *hp rx2600/zx6000 Operation and Maintenance Guide*.

---

When the locator button is pressed in, the locator LED begins to flash blue at a frequency of one blink per second both on the front of the system and the back, making it easy to locate the system.

## diagnostic LEDs

If the system has **no** Management Processor card installed, the four diagnostic LEDs on the front panel warn of impending failures and allow you to take preventive action. For example, you may want to back up your data or replace a component before it fails.

- If **no** MP card is installed, the boot progress is monitored by Diagnostic LEDs 1-4. During the boot-up the LEDs turn on in sequence until the EFI prompt is reached.
- If an MP card is installed, the boot process is monitored by the MP card. The LEDs are off.

The *hp rx2600/zx6000 Operation and Maintenance Guide* lists the specific faults associated with each LED lighting sequence.

## LAN LEDs

The front panel **LAN LED** indicates the system is communicating over the Gigabit or System Management LAN:

- **blinking green**, the system is communicating over the LAN
- **solid green**, LAN link is established, no current LAN activity
- **not green**, the system is off

Four **Gigabit LAN LEDs** are on the rear panel:

LAN LED	Location	Color	State
1. Gbit	<i>Tower</i> : Right	Off	No 1000 Mbps link
	<i>Rack-mounted</i> : Top	Green	Port linked at 1000 Mbps
2. 100mb	<i>Tower</i> : 2nd from right	Off	No 100 Mbps link
	<i>Rack-mounted</i> : 2nd from top	Green	Port linked at 100 Mbps
3. Link	<i>Tower</i> : 2nd from left	Off	No 10 Mbps link
	<i>Rack-mounted</i> : 2nd from bottom	Green	Port linked at 10 Mbps
4. Activity	<i>Tower</i> : Left	Off	No LAN activity
	<i>Rack-mounted</i> : Bottom	Green	Flashing or solid green LED indicates activity on LAN port



Two **System Management 10/100 LAN LEDs** are on the rear panel:

<b>LAN LED</b>	<b>Location</b>	<b>Color</b>	<b>State</b>
1. Speed	<i>Tower:</i> Right	On	Port linked at 100 Mb/s
	<i>Rack-mounted:</i> Top	Off	Port linked at 10 Mb/s
2. Activity	<i>Tower:</i> Left	On	Port linked
	<i>Rack-mounted:</i> Bottom	Off	No link established

Four **MP LAN LEDs** are also on the rear panel if the system has a MP card installed:

<b>LAN LED</b>	<b>Location</b>	<b>Color</b>	<b>State</b>
1. Self-test	<i>Tower:</i> Right	Yellow	MP running self test or error
	<i>Rack-mounted:</i> Top	Off	MP has booted
2. 10BT	<i>Tower:</i> 2nd from right	Green	10BT link established
	<i>Rack-mounted:</i> 2nd from top	Blinking Green	10BT activity
		Off	No link or 100BT link
3. 100BT	<i>Tower:</i> 2nd from left	Green	100BT link established
	<i>Rack-mounted:</i> 2nd from bottom	Blinking Green	100BT activity
		Off	No link or 10BT link
4. Standby Power	<i>Tower:</i> Left	Green	Standby Power on
	<i>Rack-mounted:</i> Bottom	Off	Standby Power off

## **troubleshooting with the e-buzzer**

When your system starts up, the system firmware performs pre-boot diagnostics to test your hardware configuration for any problems. If a problem is detected during pre-boot, the e-buzzer emits audible beeps and an encoded error message.

The e-buzzer emits a different number of beeps for each type of error. If you miss the beep code, send the signal again by pressing the power supply button for 3 seconds and release it once the sound begins.

The e-buzzer also emits an electronic signal that can be sent through a telephone line to an authorized help desk or HP Support. This signal can be decoded by help desk equipment to identify the workstation model and serial number as well as details about any faults. To send this signal to HP Support, hold your telephone next to the e-buzzer icon on the system front bezel when the system is booting.

<b>Number of Beeps</b>	<b>Component</b>	<b>Description</b>
<b>1</b>	Processor	Processor absent or not correctly connected. Reseat or replace processor.
<b>2</b>	Power Supply	Power supply failure. Replace power supply.
<b>3</b>	Memory	No memory, bad memory modules or incompatible memory module. Check memory module loading order. Reseat or replace memory modules.
<b>4</b>	Graphics Card	Graphics card problem. Reseat or replace the graphics card.
<b>5</b>	PCI Card	PCI card problem. Reseat or replace the PCI card.
<b>6</b>	General Failure	Possible problems include: System board failure, CPU connection problem, CPU failure, CPU power failure. See the <i>hp rx2600/zx6000 Operation and Maintenance Guide</i> for additional details and recommendations.
<b>7</b>	System Board	Defective system board. Contact support.

NOTE: See the *hp rx2600/zx6000 Operation and Maintenance Guide* for detailed instructions on removing and replacing system components.

## the system event log

The system LEDs and e-buzzer do not report all problems, only the problems listed below. If the e-buzzer indicates an error, the system event log (SEL) will provide a more detailed explanation of the failure.

For additional information on accessing and reading the SEL, see the *hp rx2600/zx6000 Operation and Maintenance Guide*.

## software diagnostics tools

This section includes information on the HP e-DiagTools Hardware Diagnostics.

Before you run the HP diagnostic software, take note of any e-buzzer and LED error messages. To find out more about the error, note any event messages and use the tool appropriate for your system to determine what failed.

---

NOTE: Event messages are listed in Appendix D of the *hp rx2600/zx6000 Operation and Maintenance Guide*.

---

## hp e-ddiagtools hardware diagnostics

Your system came with an *HP IPF Offline Diagnostics and Utilities* CD with HP e-DiagTools Hardware Diagnostics. These tools may be used to diagnose hardware-related problems on your HP system.

Before contacting HP for Warranty service, run e-DiagTools to obtain information that will be requested by a Support Agent.

With this utility you can:

- Check the hardware configuration and verify that it is functioning correctly.
- Test individual hardware components.
- Diagnose hardware-related problems.
- Obtain a complete hardware configuration.
- Provide precise information to an HP support agent so they can solve problems quickly and effectively.

HP e-DiagTools provides a user-friendly interface to the *Offline Diagnostics Environment (ODE)*, that enables you to troubleshoot a system that is running without an OS or cannot be tested using the online tools. ODE can also be run separately using a command line interface, which allows the user to select specific tests and/or utilities to execute on a specific hardware module. See the *hp rx2600/zx6000 Operation and Maintenance Guide* for more information.

## starting hp e-diagtools

1. Insert the *HP IPF Offline Diagnostics and Utilities* CD in the CD or DVD drive.
2. From the EFI shell (page 1-17), select the CD/DVD drive:
  - a. Use the **map** command to list the drives on your system. For example:

```
Shell> map
Device mapping table
fs0:Acpi(HWP0002,0)/Pci(2|0)/Ata(Primary,Master)/CDROM...
fs1:Acpi(HWP0002,100)/Pci(1|0)/Scsi(Pun0,Lun0)/HD(Part...
blk0:Acpi(HWP0002,0)/Pci(2|0)/Ata(Primary,Master)...
blk1:Acpi(HWP0002,0)/Pci(2|0)/Ata(Primary,Master)/CDROM...
```

---

NOTE: Lines are truncated to fit.

---

- b. Change to the CD/DVD drive:
 

```
Shell> fs0:
fs0:>
```
3. Navigate to the EFI\BOOT directory on the CD:
  - a. Change to the EFI directory on the diagnostics CD.
 

```
fs0:> cd EFI
fs0\EFI:>
```
  - b. Execute the **ls** command to list the contents of the directory.

```
fs0:\EFI> ls
Directory of: fs1:\EFI
11/07/02 04:41p <DIR> 1,024 .
11/07/02 04:41p <DIR> 0 ..
11/07/02 04:41p <DIR> 1,024 HP
11/07/02 04:45p <DIR> 1,024 BOOT
0 File(s) 0 bytes
4 Dir(s)
```

- a. Change to the BOOT subdirectory

```
fs0\EFI:> cd BOOT
fs0\EFI\BOOT:>
```

- b. Execute the **ls** command to list the contents of the directory.

```
fs0:\EFI\BOOT> ls
Directory of: fs1:\EFI\BOOT
11/07/02  04:45p <DIR>          1,024 .
11/07/02  04:45p <DIR>          1,024 ..
11/07/02  01:54p              731,136 LaunchMenu.efi
11/07/02  01:54p              2,763 IO.ini
11/07/02  01:54p              731,136 BOOTIA64.EFI
11/07/02  01:54p              2,995 LaunchMenu.ini
11/07/02  01:54p              3,977 View_Doc.ini
5 File(s)    1,472,007 bytes
2 Dir(s)
```

4. Execute the **LaunchMenu** command to reboot from the CD and launch eDiagTools.

```
fs0:\BOOT> launchmenu
```

5. If you are not familiar with e-DiagTools, review the documentation. From the main menu:
  - a. Select **View Release Notes and Documentation Menu** to view a list of available documentation.
  - b. Select **View e-DiagTools Info** to open the overview document.
6. If you are already familiar with e-DiagTools, select **Run e-DiagTools for IPF** from the main menu.

## producing a support ticket

To produce a complete record of your system's configuration and test results, you must create a Support Ticket. This is a simple text file that contains essential information and is designed to assist your local or HP Support Agent.

To produce a Support Ticket, from the **Welcome to e-DiagTools** Menu:

1. Start e-DiagTools and select **Run eDiagTools for IPF** from the main menu.
2. Select **2 - Run e-DiagTools Basic System Test (BST)** to run the basic diagnostics on your system if you have not already done so.

e-DiagTools scans your system. The Configuration Description displays on the screen when the configuration detection phase is complete.

3. Select **2 - Continue Test** to run the rest of the basic diagnostics test. The results will display on the screen. For example:

```
*****
```

```
e-Diagtools for IPF    rev. A.01.39      (c)
Hewlett-Packard Company, 2002
```

Test Results

Tests passed. No errors found.

If you still experience problems with your system, try the following:

1. Power off and restart your system.
2. Update the system's firmware.
3. Back up your data and contact your HP Support Agent for more advice.

1-Help 2-Advanced 3-Exit 4-Support Ticket



4. After the test is complete, press **4**. The Support Ticket will display on the screen. For example:

```

-----
HEWLETT-PACKARD e-Diagtools Support Ticket
-----
~~~~~
Your system: HP - zx6000
Diagnostic: System Test Passed
Date/Time: 05/01/2003 14:37:41
~~~~~

```

- ☐ The Support Ticket is a screen that displays a complete record of the test results and the system's configuration. It is the most effective way of communicating this essential information to your support provider.
  - ☐ The current Support Ticket is the one produced by the last execution of e-Diagtools. When running e-Diagtools, you can create a Support Ticket on demand in the Configuration Description Screen. When you run the basic system tests or advanced system tests, a Support Ticket is created automatically. Use the Support Ticket Screen to browse it for information that can help you troubleshoot your system.
  - ☐ Have the support ticket on the screen when you contact customer support. (Use the arrow keys to scroll if necessary.) The support representative may ask you to read the information over the phone.
5. Press **3** to exit the Support Ticket tool.

## restoring the OS

Your system ships with a CD or DVD that allows you to reinstall your OS and drivers or other factory-supplied software components. The drivers and software utilities, including documentation and navigational aids, help you to recover the pre-loaded software.

The process, documentation, and media are different for each OS:

■ HP-UX

- ❑ *HP Recovery CD for HP-UX*
- ❑ Instructions on CD sleeve
- ❑ **[www.hp.com/go/bizsupport](http://www.hp.com/go/bizsupport)**

■ Windows

- ❑ Integrity rx2600 server: *Windows Re-Installation Media*
- ❑ workstation zx6000: *Windows XP 64-Bit Edition Version 2003 Recovery DVD*
- ❑ Instructions on DVD sleeve
- ❑ DVD contents can be accessed through Windows Explorer

■ Linux

- ❑ *HP Enablement Kit for Linux CD*
- ❑ Instructions in *HP Enablement Kit for Linux* booklet
- ❑ **[docs.hp.com/linux](http://docs.hp.com/linux)**, under “Linux for Itanium 2-based Servers and Workstations”



**CAUTION:** Using the Recovery CD permanently erases the current contents of your hard disk. Backup all data and personal files before using the Recovery CD.

---

## where to get help

HP Customer Care Centers can help you solve problems related to HP products and, if necessary, initiate appropriate service procedures. Support is available on the web and by phone.

For information on contacting HP Customer Care, go to:

**[www.hp.com/go/bizsupport](http://www.hp.com/go/bizsupport)**

## information to collect before you contact support

Before you contact support, you should:

1. Collect the following information:
  - ☐ Model number (**zx6000** or **rx2600**)
  - ☐ Serial number (printed on the information tab above the hard drives)
  - ☐ Product number (if applicable, this is printed next to the serial number)
2. Be familiar with your system configuration and note any errors that have occurred. For example:
  - ☐ When did the problem start?
  - ☐ Have you made any recent changes to the system?
  - ☐ What firmware version is installed?
  - ☐ Have you made any recent changes to the firmware settings?
  - ☐ How much memory is installed? Is it HP or third-party memory?
  - ☐ What accessory card slots are being used?
  - ☐ What OS is installed on the system?
  - ☐ Have you changed to a different OS? If so, what OS and version?
  - ☐ Is the OS giving any error messages?
3. Check the previous sections in this chapter and attempt to solve the problem.

4. Take note of any LED and e-buzzer error messages and try to solve the problem according to the solutions suggested:
  - ❑ Are there any LED errors? (Displays on screen during boot. See “Troubleshooting with the LEDs” on page 2-6 for a list of common LED errors and recommended solutions.)
  - ❑ Are there any e-buzzer errors? (Audible beeps during boot. See “Troubleshooting with the e-buzzer” on page 2-10 for a list of e-buzzer beep sequences and recommended solutions.)
5. Use the diagnostic software on your system (See “Software Diagnostics Tools” on page 2-13).
6. Run HP DiagTools and produce a support ticket (See “HP e-DiagTools Hardware Diagnostics” on page 2-13).

## online support

To contact HP Customer Care online, see the *Worldwide Limited Warranty and Technical Support Guide* or go to

**[www.hp.com/go/bizsupport](http://www.hp.com/go/bizsupport)** and enter your product name (**zx6000** or **rx2600**) in the search field.

---

NOTE: After accessing the site, select the appropriate hardware. Selected publications are also available as printed books.

---

The following information is available on this web site:

- Firmware updates (including the upgrade utility and instructions).
- The latest drivers and software utilities.
- Additional documentation (see below).

## phone support

To contact HP Customer Care by phone:

- Call hp at 1-800-593-6631 (USA).
- Visit **[www.hp.com/country/us/eng/contact\\_us.html](http://www.hp.com/country/us/eng/contact_us.html)** to find the phone number in your region.

## additional documentation

The following documentation is available on the *Documentation and Utility CD* provided with your system and on the support web site listed above:

- *Quick Start Guide*— basic information on setting up your new system.
- *Getting Started Guide* (this document) — information on setting up and configuring your system, along with basic troubleshooting information.
- *Operations and Maintenance Guide* — detailed information on installing and replacing parts, troubleshooting, and configuring the system.
- *Safety and Comfort Guide* — information on using your system safely and avoiding injury or discomfort.

Recovery instructions accompany CD/DVD.

- *Recovery CD/DVD Instructions* — detailed instructions on restoring your OS if you need to restore the system to the original shipping configuration.



# A

---

## Regulatory Information

This appendix includes:

- Declaration of conformity
- International regulatory statements

## declaration of conformity

### Declaration of Conformity according to ISO/IEC Guide 22 and EN 45014

**Manufacturer:** Hewlett-Packard Company  
3404 East Harmony Rd.  
Fort Collins, CO 80528  
USA

**Declares that the:**

**Product Type:** Computer Workstation/Server

**Marketing Designation(s):** zx6000, rx2600

**Regulatory Model Number:** FCLSA-0201

**Product Options:** All

**conforms to the following specifications:**

**Safety.** IEC 60950:1991+A1+A2+A3+A4 / EN 60950:1992+A1+A2+A3+A4  
IEC 60825-1:1993+A1 / EN60825-1: 1994+A11 Class 1 for LED's and Lasers  
U.S.A. 21CFR Subpart J - for FC Laser module  
China GB4943-1995  
Russia GOST R 50377-92

**EMC.** CISPR 22: 1997 / EN 55022: 1998 Class A  
CISPR 24: 1997 / EN 55024: 1998  
Also compliant with...  
EN 61000-3-2:1998  
EN 61000-3-3: 1995  
EN 61000-4-2:1999 - 4 kV CD, 8 kV AD  
EN 61000-4-3:1996 - 10V/m for server version (restricted USB peripherals)  
3V/m for workstation version  
EN 61000-4-4:1995 - 2 kV Signal, 4 kV Power Lines  
EN 61000-4-5:1995 - 1 kV Differential mode, 2 kV Common mode  
EN 61000-4-8:1993 - 3 A/m  
EN 61000-4-11:1994  
U.S.A. FCC Part 15, Class A  
Japan VCCI Class A  
Australia/New Zealand AS/NZS 2064:1997, AS/NZS 3548:1995  
China GB9254-1998  
Region of Taiwan CNS 13438:1997 Class A  
Russia GOST R 29216-94

and is certified or verified by:

UL Listed to UL1950, 3rd edition, File E146385  
cUL Listed to CSA C22.2 No. 60950-00 3rd Edition  
UL GS Certificate to EN60950 2nd edition with A1+A2+A3+A4+A11  
HP Fort Collins CCQD HTC

**Supplementary information:**

The product herewith complies with the requirements of the Low Voltage Directive 73/23/EEC and the EMC Directive 89/336/EEC and carries the CE-marking accordingly.

This product was tested in a typical Hewlett Packard computer configuration.

**For Compliance Information ONLY, contact:** European contact: Hewlett-Packard, HQ-TRE,  
Herrenberger Straße 140, D-71034 Böblingen

(FAX: +49-7031-14-3143)

Americas contact: Hewlett-Packard, WGBU Quality Manager, 3404 E. Harmony Rd., Ft. Collins, CO 80528,  
U.S.A.(FAX: (970) 898-4556)



## **federal communications commission radio frequency interference statement (for usa only)**

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules and the Canadian Department of Communications. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Hewlett-Packard's FCC Compliance Tests were conducted with HP-supported peripheral devices and HP shielded cables, such as those you receive with your system. Changes or modifications not expressly approved by Hewlett-Packard could void the user's authority to operate the equipment.

## **notice for canada**

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la Class A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

## **safety warning for the usa and canada**

If the power cord is not supplied with the computer, select the proper power cord according to your local national electric code:

- USA: use a UL listed type SVT detachable power cord.
- Canada: use a CSA certified detachable power cord.

For your safety, never remove the system's cover without first removing the power cord and any connection to a telecommunication network. Always replace the cover before switching on again.

Si le cordon secteur n'est pas livré avec votre ordinateur, utiliser un cordon secteur en accord avec votre code électrique national.

- USA: utiliser un cordon secteur "UL listed," de type SVT.
- Canada: utiliser un cordon secteur certifié CSA.

Pour votre sécurité, ne jamais retirer le capot de l'ordinateur sans avoir préalablement débranché le cordon secteur et toute connexion à un réseau de télécommunication. N'oubliez pas de replacer le capot avant de rebrancher le cordon secteur.

## **notice for france**

Il y a danger d'explosion s'il y a remplacement incorrect de la batterie. Remplacer uniquement avec une batterie du même type ou d'un type équivalent recommandé par le constructeur. Mettre au rebut les batteries usagées conformément aux instructions du fabricant.

## **notice for the netherlands**

Bij dit apparaat zijn batterijen geleverd. Wanneer deze leeg zijn, moet U ze niet weggooien maar inleveren als KCA.

## **notice for germany**

Wenn die Batterie nicht korrekt eingebaut wird, besteht Explosionsgefahr. Zu ihrer eigenen Sicherheit sollten Sie nicht versuchen, die Batterie wiederaufzuladen, zu zerlegen oder die alte Batterie zu verbrennen. Tauschen Sie die Batterie nur gegen den gleichen oder ähnlichen Typ aus, der vom Hersteller empfohlen wird. Bei der in diesem PC integrierten Batterie handelt es sich um eine Lithium-Batterie, die keine Schwermetalle enthält. Batterien und Akkumulatoren gehören nicht in den Hausmüll. Sie werden vom Hersteller, Händler oder deren Beauftragten kostenlos zurückgenommen, um sie einer Verwertung bzw. Entsorgung zuzuführen.

## noise declaration for germany

Lärmangabe nach Maschinenlärmverordnung - 3 GSGV  
(Deutschland) LpA < 70 db am Arbeitsplatz normaler Betrieb nach  
EN27779: 11.92.

## notice for japan (class a)

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラスA情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

## notice for korea

시용시 안내문 (A급 기기)

이 기기는 업무용으로 전자파장애감정을 받은  
기기이오니, 만약 잘못 구입하셨을 때에는 구입  
한 곳에서 비입무용으로 교환하시기 바랍니다.

## notice for taiwan

警告使用者：  
這是甲類的資訊產品，在居住的  
環境中使用時，可能會造成射頻  
干擾，在這種情況下，使用者會  
被要求採取某些適當的對策。



## A

- accessory slots 1-1
- Add a Boot Option 1-20
- Administrator 1-23
- Advanced System Configuration Menu 1-24
- Advanced System Information Menu 1-22
- AGP graphics card 1-21
- Auto Boot TimeOut 1-20

## B

- Baseboard Management Controller 1-26
- BMC 1-26
- Boot 1-24
  - boot 1-14
- Boot commands 1-19
- Boot from a File 1-20
- Boot menu 1-14
- Boot Options Maintenance menu 1-20
- Bootable Devices 1-24
- BootNext 1-20

## C

- Cache 1-24
- Change Boot Order 1-20
- Chip Revision 1-24
- Cold Reset 1-21
- components 1-6, 1-12
- configuration 1-1, 1-26
- Configuration commands 1-19
- connectors 1-4, 1-8
- Console 1-21

- console 1-25, 1-26, 2-5
- CPU 2-11

## D

- Date 1-22
- declaration of conformity 2-1
- Default 1-22
- Delete Boot Option(s) 1-20
- Device commands 1-19
- Diagnostic LEDs 1-2, 1-3, 2-7
- diagnostics 1-26, 2-1
- Disk Activity LEDs 1-2
- documentation 2-21

## E

- e-buzzer 1-2, 1-3, 2-1, 2-10
- e-DiagTools 2-13
- EFI 1-10, 1-14
- EFI boot option screen 1-17
- EFI command classes 1-19
- EFI commands 1-18
- EFI Shell 1-14
- EFI shell 1-17

## F

- fan 1-1
- File systems 1-17
- Firmware 1-24
  - firmware version 1.x 1-14
  - firmware version 2.0 1-14
- front panel 1-1, 1-2, 1-3

## **G**

Gigabit LAN 1–4, 2–8  
graphics cards 2–1, 2–5, 2–11

## **H**

hardware problem 2–1  
help 1–23, 2–1, 2–19  
HP Customer Care 2–19  
HP e-DiagTools 2–13  
HP-UX 1–11, 2–18

## **I**

IPMI 1–26

## **K**

keyboard 1–5, 2–1, 2–3

## **L**

LAN 1–5, 2–8  
LAN LED 1–3, 1–4  
LAN LEDs 2–8  
LED 2–1  
Linux 1–11, 2–18  
Locator button 1–2, 1–4  
Locator LED 1–2, 1–3, 1–4, 1–5  
Locator LED and Button 2–6  
lock 1–5

## **M**

Manage BootNext Setting 1–20  
Management Processor 1–1, 1–4, 1–25  
Memory 1–24  
memory 2–11  
Memory commands 1–19  
modem 1–25  
Monitor 1–21  
monitor 1–4, 2–1, 2–5  
mouse 1–5, 2–1, 2–4  
MP 1–4, 1–5, 1–25, 2–9  
MP LAN 1–4, 2–9  
MP VGA port 1–21

## **O**

ODE 2–13  
Offline Diagnostics Environment (ODE)  
2–13  
OS 2–1, 2–18

## **P**

password 1–14, 1–23, 1–25, 2–5  
Passwords 1–23  
PCI cards 2–11  
ports 1–4  
power 1–1, 1–2, 1–3, 1–5, 1–11, 2–2, 2–6,  
2–11  
Processor 1–24  
processor 2–11

## **R**

rack-mount 1–1, 1–3, 1–6  
rear panel 1–1, 1–5  
regulatory 2–1  
remote 1–26  
Remote access 1–16  
reset 1–5  
Reset Configuration to Default 1–22

## **S**

safety 1–6, 1–7  
Script 1–17  
Scripts 1–19  
SCSI 1–5  
security 1–14, 1–22, 1–23  
Security/Password Menu 1–14, 1–23, 1–24  
Select Active Console Input Devices 1–21  
Select Active Console Output Devices 1–21  
Select Active Standard Error Devices 1–21  
serial 1–5, 1–25  
Set Auto Boot TimeOut 1–20  
Set System Date 1–22  
Set System Time 1–22  
Shell commands 1–19

shut down 1–11  
software 1–11  
start 1–10  
startup.nsh 1–17  
support 2–16, 2–19  
support ticket 2–16  
system board 2–11  
system configuration 1–1  
System Configuration Menu 1–14, 1–22  
System LED 1–2, 1–3, 2–6  
System Management 10/100 LAN 1–4, 2–9

## **T**

telnet 1–25  
Terminal emulation 1–16

Time 1–22  
TOC button 1–5  
tools 1–7  
tower 1–1, 1–3, 1–6  
troubleshooting 1–26, 2–6

## **U**

USB 1–5  
User 1–23

## **V**

VGA 1–5, 1–21

## **W**

Windows 1–11, 2–18

